

Pre-Test Revision

Monday 21th Jan 2019

Maths 10

second degree and parametric equation

Name: _____

Problem 1 (Solving second degree equations)

i) $4x^2 - 7x - 15 = 0$

iii) $2x^2 - 8x + 8 = 0$

ii) $2x^2 - 5x + 13 = 0$

Problem 2 How many solutions have the following equations

i) $3x^2 - 30x + 78 = 6(x - 5)$

ii) $2x^2 - 7(2x - 4) = 0$

iii) $2x^2 - 7(2x + 4) = 0$

Problem 3

i) Factorise $x^2 - 15x + 44$

iv) Factorise $2x^2 - 5x + 3$

Problem 4

For what values of m does the equation

$$mx^2 - 3x + m = 0 \text{ have two solutions?}$$

(You may need the following rule : **If $m^2 < A^2$ then $-A < m < A$**)

Problem 5

For what values of s does the equation

$$(s-1)x^2 - 2(s-3)x + s-3 = 0 \text{ have}$$

i) a double solution

ii) no solutions?

Problem 6

i) For what values of λ does the equation

$$(\lambda + 2)x^2 + 4(\lambda - 4)x + (\lambda + 2) \text{ have a double solution?}$$

ii) For each of these values of λ , what is the solution?